

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A stent delivery system comprising:

a catheter;

a balloon operably attached to the catheter; and

a stent disposed on the balloon, the stent having a plurality of end-to-end cylindrical stent segments, the axes of the plurality of cylindrical stent segments lying along a longitudinal axis of the stent, the stent having a first region continuous across at least one pair of adjacent cylindrical stent segments and a second region continuous across at least one pair of adjacent cylindrical stent segments;

a first coating section, the first coating section disposed on and completely covering the outer surface of the adjacent cylindrical stent segments in the first region and comprising a first polymer; and

a second coating section, the second coating section disposed on and completely covering the outer surface of the adjacent cylindrical stent segments in the second region and comprising a second polymer;

wherein the first region and the second region are discrete, and the first coating section and the second coating section are discrete.

Claim 2 (cancelled):

Claim 3 (original): The stent delivery system of claim 1 wherein the first coating section includes a first therapeutic agent and the second coating section includes a second therapeutic agent.

Claim 4 (original): The stent delivery system of claim 1 wherein the first coating section includes a therapeutic agent.

Claim 5 (previously presented): The stent delivery system of claim 1 wherein the first region and the second region form a pattern selected from the group consisting of ring patterns, striped patterns, and spotted patterns.

Claim 6 (currently amended): A coated stent comprising:

a stent having a plurality of end-to-end cylindrical stent segments, the axes of the plurality of cylindrical stent segments lying along a longitudinal axis of the stent, the stent having a first region continuous across at least one pair of the adjacent cylindrical stent segments and a second region continuous across at least one pair of the adjacent cylindrical stent segments;

a first coating section, the first coating section disposed on and completely covering the outer surface of the adjacent cylindrical stent segments in the first region and comprising a first polymer; and

a second coating section, the second coating section disposed on and completely covering the outer surface of the adjacent cylindrical stent segments in the second region and comprising a second polymer;

wherein the first region and the second region are discrete, and the first coating section and the second coating section are discrete.

Claim 7 (cancelled):

Claim 8 (previously presented): The coated stent of claim 6 wherein the first coating section includes a first therapeutic agent and the second coating section includes a second therapeutic agent.

Claim 9 (original): The coated stent of claim 6 wherein the first coating section includes a therapeutic agent.

Claim 10 (previously presented): The coated stent of claim 6 wherein the first region and the second region form a pattern selected from the group consisting of ring patterns, striped patterns, spotted patterns, and spotted patterns.

Claim 11 (currently amended): A method for producing a coated stent comprising:

providing a stent having a plurality of end-to-end cylindrical stent segments, the axes of the plurality of cylindrical stent segments lying along a longitudinal axis of the stent, the stent having a first region continuous across at least one pair of adjacent cylindrical stent segments and a second region continuous across at least one pair of adjacent cylindrical stent segments;

mixing a first polymer and first therapeutic agent with a first solvent to form a first polymer solution;

applying the first polymer solution to the first region to form a first coating section completely covering the outer surface of the adjacent cylindrical stent segments in the first region;

mixing a second polymer and second therapeutic agent with a second solvent to form a second polymer solution; and

applying the second polymer solution to the second region to form a second coating section completely covering the outer surface of the adjacent cylindrical stent segments in the second region,

wherein the first coating section and the second coating section are discrete, and the first region has a longitudinal length greater than the diameter of the stent in an expanded state.

Claim 12 (original): The method of claim 11 wherein applying the first polymer solution and applying the second polymer solution further comprises applying the first polymer solution and applying the second polymer solution simultaneously.

Claim 13 (original): The method of claim 11 further comprising curing the first polymer solution and curing the second polymer solution.

Claim 14 (original): The method of claim 11 wherein applying the first polymer solution to the first region further comprises:

mounting the stent in a coating fixture; and
spraying the first polymer solution on the first region.

Claim 15 (original): The method of claim 14 wherein the coating fixture is a computerized numerically controlled machine.

Claim 16 (original): The method of claim 14 wherein spraying the first polymer solution on the first region further comprises spraying the first polymer solution by a spraying method selected from the group consisting of micro-spraying and inkjet spraying.

Claim 17 (original): The method of claim 11 wherein applying the first polymer solution to the first region further comprises applying the first polymer solution by an application method selected from the group consisting of pad printing, inkjet printing, rolling, painting, spraying, micro-spraying, dipping, wiping, electrostatic deposition, vapor deposition, epitaxial growth, and combinations thereof.

Claim 18 (currently amended): A system for producing a coated stent from a stent having a plurality of end-to-end cylindrical stent segments, the axes of the plurality of cylindrical stent segments lying along a longitudinal axis of the stent, the stent having a first region continuous across at least one pair of the adjacent cylindrical stent segments and a second region continuous across at least one pair of the adjacent cylindrical stent segments, comprising:

means for providing a stent having a plurality of cylindrical stent segments, the stent having a first region continuous across at least one pair of the adjacent cylindrical stent segments and a second region continuous across at least one pair of the adjacent cylindrical stent segments;

means for mixing a first polymer and first therapeutic agent with a first solvent to form a first polymer solution;

means for applying the first polymer solution to the first region to form a first coating section completely covering the outer surface of the adjacent cylindrical stent segments in the first region;

means for mixing a second polymer and second therapeutic agent with a second solvent to form a second polymer solution; and

means for applying the second polymer solution to the second region to form a second coating section completely covering the outer surface of the adjacent cylindrical stent segments in the second region,

wherein the first coating section and the second coating section are discrete, and the first region has a longitudinal length greater than the diameter of the stent in an expanded state.

Claim 19 (original): The system of claim 18 wherein means for applying the first polymer solution and means for applying the second polymer solution further comprises means for applying the first polymer solution and the second polymer solution simultaneously.

Claim 20 (original): The system of claim 18 further comprising means for curing the first polymer solution and means for curing the second polymer solution.

Claim 21 (original): The system of claim 18 wherein means for applying the first polymer solution to the first region further comprises:

means for mounting the stent in a coating fixture; and

means for spraying the first polymer solution on the first region.

Claim 22 (currently amended): A coated stent comprising:

a stent having a plurality of end-to-end cylindrical stent segments, the axes of the plurality of cylindrical stent segments lying along a longitudinal axis of the stent, the stent having a discrete first region continuous across at least one pair of the adjacent cylindrical stent segments and a discrete second region continuous across at least one pair of the adjacent cylindrical stent segments;

a first polymer including a first therapeutic agent, the first polymer disposed on and completely covering the outer surface of the adjacent cylindrical stent segments in the discrete first region as a first coating section; and

a second polymer including a second therapeutic agent, the second polymer disposed on and completely covering the outer surface of the adjacent cylindrical stent segments in the discrete second region as a second coating section,

wherein the first coating section and the second coating section are discrete, and the discrete first region has a longitudinal length greater than the diameter of the stent in an expanded state.

Claim 23 (original): The coated stent of claim 22 wherein the discrete first region and the discrete second region are separated by a bare section.

Claim 24 (original): The coated stent of claim 23 wherein the bare section extending between the discrete first region and the discrete second region for a distance of approximately 1 millimeter (0.03937 inches)

Claim 25 (original): The coated stent of claim 24 wherein the bare section extending between the discrete first region and the discrete second region for a distance of approximately 0.025 millimeter (0.00098 inches).

Claims 26-27 (cancelled)